

# Virginia Wildlife

APRIL 1978  
50¢



PETER A. STRZELEWICZ



# Virginia Wildlife

April, 1978, Volume XXXIX, No. 4

Dedicated to the Conservation of Virginia's  
Wildlife and Related Natural Resources

COMMONWEALTH OF VIRGINIA  
JOHN N. DALTON, GOVERNOR

Commission of Game and Inland Fisheries

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Brook Trout, by Peter A. Strzelewicz  
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# Editorial

## Another Gun Bill

The National Rifle Association reports that a Carter administration gun bill has been drafted and although it has not yet been introduced, most of its major features are known. According to the NRA it will require that the transfer of any handgun be handled through a dealer with accompanying federal firearms forms and legal criteria. The NRA point out that guns could then be traced through dealer records from factory to current owner. Those already in private hands would be recorded only if sold.

A second provision of the bill will set safety and suitability requirements for handguns and require the Secretary of the Treasury to test all guns manufactured after 1968 to see if they qualify as sporting weapons according to a system of points. Those not passing the test would be banned. Although designed to get rid of the infamous "Saturday Night Special", the NRA feels it would also eliminate many high quality handguns. Guns made before 1968 could be

likewise tested and banned making sale or transfer illegal. Thus, the gun would have to be disposed of upon death of the original owner.

Handgun purchasers would face a 21 day waiting period and federal and local police background checks. The federal check would be waived in cases where state handgun purchase licenses were required. The Treasury Department would be given much broader authority to control (or persecute) gun dealers in hopes of drastically reducing the 160,000 gun dealers now in business.

If such a bill should pass, the coming generation of gun owners could look forward to all legitimate handguns being listed in federal records within their lifetimes. State licensing of purchasers would be encouraged and the number of gun dealers would shrink. Illegal transfers of "registered" guns would be subject to heavy penalties and fines; but how the measure would prevent the illegal transfer of the 50 million unrecorded handguns now in private ownership is unclear. Presumably the bureaucrats are busy working on that.—HLG

## Letters

### PRaise FOR VIRGINIA WILDLIFE

Your magazine is becoming more readable each issue. The paper is magnificent, your authors, writers, photographers and illustrators are the best! The "Special" by Judy Price and Paul Bratton was so literate and so beautifully worded it made me so glad to be alive.

*William Pickels*  
Clearwater, Florida

### PRINT IS NECESSARY

In the October issue of *Virginia Wildlife* is a nice picture of the Eastern bluebird, and on the cover is another of an opossum. But each of them is spoiled by printing. Is there some special reason why the lettering is put on the cover and other pictures?

*Annie L. N. Futrell*  
Newport News

*I think we have done better since. However, we are first a magazine and second a source of pretty pictures.*

### UNSPORTSMANLIKE SPORTSMEN

Your article on deer hounds really hit home, especially here in Fauquier County. I, myself, enjoy hunting with the sad-faced hound, as described by Mr. Gooch. I agree whole-heartedly with his remarks on the fact that the hunt with the hound does attract a great number of illegal, so-called road hunters and it should be, by all means, cleaned up. As soon as the truck with the dogs hits the road, the road hunters seem to pop up from nowhere, giving us by-the-law hunters a bad name. It almost makes one feel guilty to say he hunts with hounds.

*Joseph L. Baker*  
Warrenton

### SUPPORT FOR DR. GIBB

I am the oldest native-born resident of the Wood Bridge area of Prince William County and have been reading *Virginia Wildlife* for as many years as I can remember. I agree with William Phillip Gibb, M.D. about the osprey carrying the

fish crossways on the cover of the July issue. We always called them fish hawks, and they carried the fish head first. I saw one catch a rockfish once that carried the osprey under the water several times.

*Carl Eike, Jr.*  
Wood Bridge

### NOT ALL WET

I would like to suggest something that I think would add to your magazine. Take all the lakes in our state and streams, one at a time, and make a two-page layout or map and indicate the public and private access areas, ramps, marinas, campgrounds and other pertinent information. The format could be similar to the one on the James River in the June 1977 issue. The same could be done for our state hunting areas.

*Johnny E. Jordan*  
Poquoson

*We have plans for the streams—will keep your other suggestions in mind.—Ed.*





*Wild Turkey  
at Broad Run*



BY WILLIAM D. WEEKES

Every turkey hunter seeks to practice his deception of calling in a gobbler. He relishes a reasonable chance of confrontation with *Meleagris gallopavoss* where his skill as a shooter is pitted against the instinct that drives a turkey to escape.

The game manager's ultimate objective is to provide these recreational hours--the more, the merrier. His immediate objective, then, is to find ways and means of keeping turkey populations abundant enough to hunt. He wants those birds harvested to be those that were expendable; those from a population which will--despite the ravages of predation and winter--be sufficient in number to reproduce to a level of abundance that can again be safely presented to hunters a following season.

A game manager must determine whether a range represents a maximum carrying capacity for turkeys and if it doesn't, to find the means and perform the practices which will enable the habitat to sustain as many turkeys as it is capable of holding within the limitations of the turkey's social tolerances.

As with any game species, the carrying capacity of its range is best enhanced by habitat manipulation--man's efforts to change the environment for the benefit of a wildlife population, and, ultimately, the hunter's bag. In the case of such forest game species as the wild turkey, this means breaking up the monotony of the forest canopy with openings.

For more than 40 years the practice of providing openings has been recognized by wildlife managers to be beneficial to the wild turkey. Openings, when man-made, have been either small clearcut areas--land eliminated of trees by cuttings--or small tree-cleared plots on which the soil has been prepared and planted to forage crops. The former method is a forestry silvicultural practice; the latter method is a wildlife management practice, more intensive because agricultural crops are grown on former wooded land to furnish supplemental game food.

Whichever the method, openings in a forest canopy diversify the wild turkey's habitat. The methods involve the interjection of different life forms of vegetation, or cover types. In this case, the cover types are grassland, shrubs, and/or cultivated fields amidst the most prevalent life form, the trees of the forest. The interspersing of cover types result in an "edge effect," which, as will be explained later, is very important in furnishing the needs of the wild turkey and other wildlife.

Each cover type is important to the turkey. Each satisfies a life requirement of this bird. The trees of the forest offer roosting sites and the oaks and dogwoods furnish the turkey with one of its most palatable staples--mash. Acorns and nuts are of critical importance as food during fall and winter. The shade of a dense forest, however, suppresses the growth of many low lying plants and limits the amount of shrubbery and other thick vegetative growth necessary to the turkey and other ground-nesting birds for cover.

Openings, at least in the early stages of vegetative succession (the orderly sequence of arrival, dominance and disappearance of different plant species on a plot of ground over a period of years) permit the full force of the sunlight to blanket the ground. Sunlight stimulates the growth of abundant herbaceous matter as well as succulent young woody browse. Early-succession grasses, sedges, and forbs sprout and grow. Such favorite fruits as blackberry, elderberry, plum, blueberry, and raspberry need full sunlight. Insects, an important source of protein for poults, were found by Martin (1972) to be 25 times more abundant in openings than in areas under the forest canopy. Turkeys are also fond of dust-bathing in the warm dirt of the openings' exposed ground. It is not surprising game managers and wildlife biologists have discovered turkey nests near open spaces.

When divergent cover types exist adjacent one another, boundaries must roughly define where one cover type ends and another begins. This boundary is the edge. This edge is a transitional zone, a buffer strip wherein vegetation of the overlapping cover types meet and mingle. But the vegetation of this zone is singular unto itself as well. Because the zone borders shade-casting trees, its vegetation receives sunlight in varying degrees of duration and intensity, unlike fully sunlit areas in the middle of openings. On the other hand, the edge receives more sunlight than would any area beneath the canopy of trees. Because the edge is diverse in its treatment by the elements, this zone will harbor a greater diversity of plant species, species varying in tolerances to the elements. The greater diversity and plant abundance found along these margins is called edge's "effect".

Wild turkeys are noted for the great variety of plant species they consume. For instance, Mosby and Handley (1943) studied the contents of 524 wild turkey crops during all months and identified 667 species of both plants and animals consumed by these birds.

Important foods include mast, grasses, sedges, wild grapes, flowering dogwood, wild cherry, seeds of pine, and herbaceous plants, berries, and roots and tubers. A 1938-39 Pennsylvania study by Kozicky (Trippensee 1948) showed that when grains are abundant in farm communities, the turkey's diet will comprise wheat (39 percent), corn (24 percent), oak acorns (10 percent) and grapes (four percent).

It would be accurate to conclude that habitat containing a great variety of palatable species, and, at the same time, furnishing adequate cover with roosting sites close at hand, would be an area highly desirable to turkey.

Leopold (1933) observed that the potential density of a non-mobile game species requiring two or more cover types to supply their needs, is proportional to the length of edge existing on that species' range.

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## What kind of openings best increase the turkey population?

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Because openings enhance the carrying capacity of a turkey range the following questions may be asked: What *kind*, of openings would best implement this objective? Would small clearcuts or partial cuts be sufficient to supply early succession vegetation, insects, and dusting sites? Will agricultural clearings be sufficient, or would a combination of both small clearcuts and agricultural clearings be most effective?

A study designed to answer this question was undertaken on the 11,422-acre Broad Run Wildlife Research Area in Craig County, Virginia. The study also asked: Do the wildlife and forestry practices discussed above significantly influence production of such forest wildlife as wild turkey? The project was organized in 1956 under the cooperative efforts of the Jefferson National Forest and the Virginia Cooperative Wildlife Research Unit, located at Virginia Polytechnic Institute and State University, Blacksburg, Virginia.

Situated in the eastern temperate deciduous forest, the Broad Run study area, in accordance with the project plan, was subdivided into three compartments of about 2,000 acres each, all similar ecologically. Each compartment was treated differently so a comparison could be made between each. In Compartment A, timber cutting (clearcutting and partial cutting) was performed without other treatments. In Compartment B, treatments included cuttings *and* development of agricultural clearings and installation of water holes. In

Compartment C only agricultural clearings and water holes (no forestry practices) were permitted.

In Compartment B there were 13 agricultural clearings and four water holes; in C, ten clearings and six water holes. The clearings ranged from 1/2 acre to 3.3 acres.

Clearing sites were bulldozed, fertilized, and seeded with Kentucky bluegrass, white Dutch clover, and Kenland clover. Wheat and rye grains were sown a bushel an acre. Mast and fruit trees were planted on the edges of some clearings. The map shows the division of Broad Run into three compartments and the locations of the clearings and water holes. Two clearings were originally located by accident in Compartment A and allowed to grow back.

Since 1957, when the clearings were installed, about one-third of each clearing was reseeded and rejuvenated every three to six years rotationally (with a mixture of annuals added).

Timber cutting and timber stand improvement (partial cuttings) in Compartments A and B took place from 1959 through 1964, with nearly 500 acres in each compartment affected.

How could the effects of these treatments be discerned on turkey populations? Theoretically, the more effective the treatment, the greater the carrying capacity in the compartment. It was essential some measure of population abundance (or lack of it) be determined. The population criteria used in the study were measures of relative abundance from sight observations by hunters. Specifically, hunter-hours per game seen reflects how treatments affected wild turkey numbers in each of the three compartments. As an index, hunter-hours per game seen is an indirect method of determining game abundance. It is not intended to estimate actual game numbers.

Major premise of the index is this: the less time it takes a hunter to see a turkey, the more abundant the species must be. In other words, the less hunter-hours per game seen (tabulated for two weeks of each fall hunting season on the study area) the more turkeys are assumed to exist.

The table shows the average number of hunter-hours per turkey seen for each two-week hunting period in November from 1964, when these data for each compartment were first kept, through 1972. Statistical analysis verified these conclusions:

1. That wildlife practices alone (agricultural clearings and water holes are practiced exclusively in Compartment C) are the best methods of habitat manipulation when maximum carrying capacity for wild turkey production and maintenance are sought.

2. The silvicultural treatments alone (clearcutting and partial cutting treatments as practiced in Compartment A) were the least satisfactory habitat manipulation practices.

The attractiveness of agricultural clearings for turkey



on Broad Run was noted from the beginning of the 15-year study period. Quillen (1959) observed two large flocks and smaller groups of turkeys in five clearings during September and October when mature rye and wheat were growing. Of 13 sight observations, involving more than 137 birds, Quillen found seven (54 percent) observations were of turkeys in grain clearings. "Grain plantings...are a great attractant to the turkeys," Quillen noted.

Seneca (1961) also used direct observation to conclude that turkeys preferred the grain-producing clearings in the summer and fall, notably those planted in wheat and rye. Also, he found turkeys were particularly fond of using the soft soil of clearings for dusting while young turkeys fed on a high protein diet of grasshoppers and other insects which were prevalent in the clearings.

Bachant (1963) observed that Compartment C had the highest population density (one bird per 102 acres), mostly because of wildlife management practices. McGinnes and Ripley (1962) agreed that clearings played an important part in a 1000 percent increase in the study area population over the first four years after their installation in 1957.

Bachant (1963) found, however, through sight observations and field signs, that hens remained near agricultural clearings during the spring of 1962. Mosby and Handley (1943) noted a turkey hen's decided preference for locating nests five to ten feet from openings.

From the above, it is understandable why more turkeys preferred a homerange in a compartment where there are forage clearings. However, both Compartments C and B, had about equal acreages in agricultural clearings, each renewed on a rotational basis. Why, then, did more turkeys apparently exist in Compartment C than B?

Both Compartments C and B had clearings and water holes, but Compartment B also had clearcut and partial

cut areas. In Compartment A, where the most number of hunter-hours were required to see a turkey (and, therefore, the least numbers of turkeys were assumed to exist), silvicultural cuttings alone were the treatments. Logically, one would have to conclude that, in some way, cuttings may somehow have neutralized the carrying capacity of a turkey range--at least if not accompanied by agricultural clearings.

One might summarize the situation as follows;

Compartment A--Offered succulent young vegetation found on clearcuts, but this would be less preferred than the cultivated crops found on agricultural clearings.

Compartment B--Offered preferred agricultural food on the clearings, and this could, in part, be offset by too much open space provided by the addition of clearcut areas.

Compartment C--Offered preferred agricultural crops, plus the security of a closed canopy elsewhere, a canopy of old, mast-producing trees

There could be three reasons why clearcut openings would not be as effective as agricultural clearings in encouraging turkey population growth. First, the cutting areas may have been too open. The cuts in A averaged 43 acres, those in B, 36 acres. Raybourne (1968) observed that turkeys on the study area would not use the interior of a 60-acre clearcut area even though the periphery of the area was used. He figured the width of the clearcut areas deterred their use by the birds. Raybourne noted that turkeys would use a clearcut 150 yards wide, but would stay within 100 yards of the woods while in a clearcut 300 yards wide.

This led Raybourne to suspect that "a usage-width ratio may exist for turkey movements in relation to clearcut timber management areas."

"It appears," wrote Raybourne, "that clearcut areas in excess of 150 to 200 yards in width may restrict turkey movements to fringe utilization of those areas. Length of clearcut areas did not seem to affect turkey movements adversely."

A second reason why clearcut areas were less used was because the birds were more attracted to areas of mast crops in the fall. A third reason: the last cuttings on the Broad Run area were made in 1964. These areas were not rejuvenated (recut) and vegetation slowly became too thick, the openings thereby losing their effectiveness and attractiveness as the years passed. This later plant succession resulted in nature growth, which limited young, volunteer herbaceous matter which the turkey finds succulent, palatable, and accessible.

A diminishing returns exists regarding the amount of openness in a forest a turkey population can tolerate. On the other hand, openness that has been beneficial to such a population in the past, must be maintained in the future to keep its effectiveness. Over 15 years at Broad Run, agricultural clearings alone have been most effective in keeping the wild turkey "happy."

*A view of the Broad Run research area.*



By MARY VICTORIA McDONALD

Spring is here to stay! Time for bird lovers to put up bird houses, pack up last winter's bird seed, and forget about feeding birds until next fall. Well, not quite. There's one bird in Virginia that can be attracted during the summer with a special feeding program. This bird is the ruby-throated hummingbird (*Archilochus colubris*).

Our smallest eastern birds, "hummers," as they are nicknamed, usually reach Virginia about the first of May in their spring migration northward. The sexes migrate separately, females won't be around until a week or two after the males arrive. While the plumage of both sexes is a metallic green, female and immature hummingbirds have plain white throat patches. The males are distinguished by their iridescent red throat feathers which give the species its name.

A hefty hummingbird weighs only about four grams-not even as much as one page of this magazine! Yet twice a year these birds migrate nonstop 500 miles across the Gulf of Mexico. Their small size, high flight speed, and skillful aerial maneuverability, including the capability to hover and even fly backwards, make these birds elusive prey for potential predators.

All species of hummingbird males woo the females with aerial acrobatic shows. The ruby-throated male tries his best to impress a female with a series of pendulum-like swoops. After mating, the polygamous male leaves the female with all the domestic chores of nest building and raising the young.

The nest, fabricated from spider webs and soft plant parts, is smaller than a golf ball. Skillfully camouflaged with lichens, the nest appears to be a protuberance on a tree limb. The two peanut-sized white eggs are laid around the first of June and hatch in 13 days. The young stay in the nest for approximately 3 weeks, during which time their mother feeds them partially digested insects.

There are two basic methods you may use to attract hummers to your yard. If your hospitality is discovered early enough in the season, the female may settle down and raise her family on your property. The first and preferred method is to encourage and plant those wild and cultivated flowers which hummers naturally frequent. The plants and insects attracted to their flowers provide a balanced diet for the birds and their offspring. To keep hummers on your property all summer, plan your garden so that there will be a succession of copious nectar-secreting flowers throughout the season. Hummingbirds seem to be especially fond of bright red and orange tubular or trumpet-shaped flowers. You may even consider planting a special garden section just for hummers.

# HUMMINGBIRDS RUBIES IN

Start attracting the first north-bound migrants when they arrive in May with trumpet honeysuckle, Japanese flowering quince, and early blooming azalea. Later, other species of honeysuckle, columbine, day lily, phlox, morning glory and petunia will feed the hummers. The flower of the trumpet vine is a real hummingbird favorite. Other desirable flowering plants include bee balm, hollyhock, larkspur, gladiolus, fuchsia, sage, snapdragon, cardinal flower and many others. The flowers of some trees, such as the mimosa and the buckeye and horse chestnut are also frequented by hummingbirds.

A second way to tempt hummingbirds to take up seasonal residency near your home is by providing supplementary food. Hummingbirds never feed at conventional bird feeders. Instead, special hummingbird feeders are used. These feeders dispense liquid nourishment in the form of sugar-water or diluted honey. A variety of hummingbird feeders can be bought or constructed.

You will probably obtain more satisfaction, however, and save money as well, by building your own hummingbird feeders. It only takes a few minutes to assemble a simple vial-type feeder from the following materials: clear glass or plastic tube-shaped vial or bottle (test tubes, cylindrical spice bottles), red or clear plastic tape; aluminum pie tin, red (spray) paint; wire, epoxy cement.

Paint the pie tin red inside and out. When dry cut a "flower" four or five inches in diameter with slits in the center. (Figure 1). Insert this flower onto the neck of the vial, glue the metal points to the vial with epoxy cement, and wrap the points with tape. (Figure 2). Shape a wire holder and tape it securely to the vial.

Feeder Solution: either sugar-water or diluted honey may be used as a solution in the feeder. Although honey has better nutritional properties, it is somewhat risky to use. Fermented honey harbors a fungus disease known to attach the hummingbird's tongue, eventually causing the birds to die. If honey is used, keep the feeder clean and replace old solutions every two days. A honey solution is made by combining one part fresh honey with four parts water. First



# BIRDS YOUR GARDEN

*I have always loved watching the antics of the hummingbird. As an amateur bird watcher, I feed the normal winter birds and the little hummer in the summer. About four or five arrive in mid April and go to the feeder as if they have been there before. By the end of the summer there are 35 to 40 humming birds using the feeders and it takes about a half-gallon of food per day! After seven years, I can tell that many birds are repeaters. They will go straight to the feeders. I can stand 10 to 12 inches from the feeders and the birds will continue to feed. The little hummers seem absolutely fearless.*

*-Early E. White*







*1st place, Stormy Flight, Vallie Booth, Richmond*

# Virginia Wildlife

Photo Contest Winners  
Wildlife Category

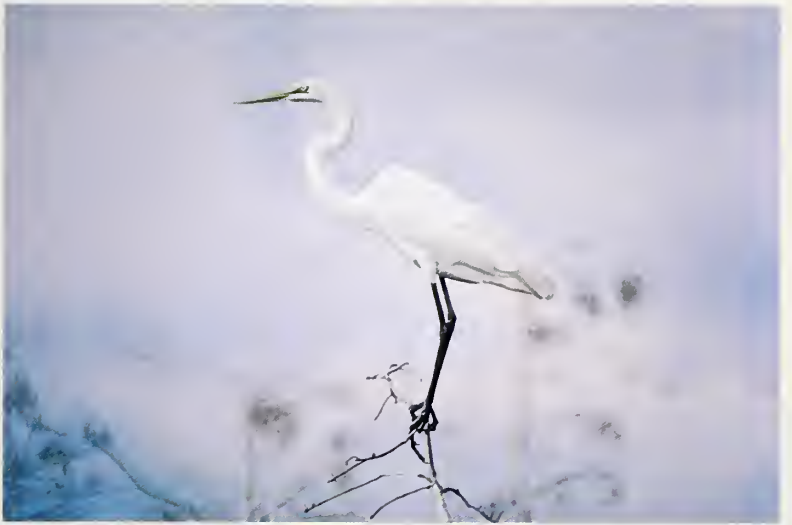


*O. J. White Photo*

*Virginia Wildlife staff members had a difficult time picking winners from among the 507 entries.*

These photos were winners in the Wildlife category of the Virginia Wildlife photo contest. The winners in the Nature and People categories will appear in coming months. In addition, there will be more honorable mentions in Wildlife coming soon.





*This American egret (right) won 3rd place for Vern Wayne Pond of Falls Church.*

*Patrick Looi of Chevy Chase, Maryland won 2nd place with this cardinal photo.*



*John Irby, Ashland, was one of 10 who won honorable mentions with this butterfly and thistle (below).*





*Harold Skinner of Poquoson with this hawk and Vern Wayne Pond's sora rail won honorable mentions.*



*This squirrel by John Irby of Ashland and these owlets by Russell Edwards of Winchester both merited honorable mentions.*





# 1978 TROUT STOCKING PLAN

Legend: \* — Notional Forest Waters R — Rainbow Trout  
B — Brook Trout BR — Brown Trout

## Period Stocked

Preseason April May June

### ALBEMARLE COUNTY

Mormans River (N&S Forks) R R  
City Water Works (Sugar Hollow) B,R B,R

### ALLEGHANY

Smith Creek\* B B B  
Pounding Mill Run\* R B R  
Jerry's Run\* R B R  
Clifton Forge Reservoir\* R R R

### AMHERST COUNTY

Pedlar River (upper & lower) B,R B,R R  
Piney River (S. Fork & Prop) B,R,BR R,BR R,BR  
Brown Creek\* R R R  
Davis Mill Creek\* R R R  
Enchanted Creek\* R R R  
Little Irish Creek\* R R R  
Pedlar River\* R R R  
S. Fork Piney River\* B B B  
Statns Creek\* R R R

### AUGUSTA

Back Creek Proper & S Fork B,R B,R R  
Jerkentight Creek\* R R R  
North River\* R,BR R R  
Buffalo Branch\* (Falls Hollow) R R R  
Ramsey's Draft\* R R R,BR  
Braley Pond\* R R,BR R,BR  
Back Creek\* R R R  
Mill Creek\* R R R  
Upper Sherando Lake\* R R R  
Lower Sherando Lake\* R R R  
Heartstone Lake\* R,BR R R  
Elkhorn Lake\* R R R  
Rowland Pond\* R R R  
Cold Spring Ponds\* B,R R R

### BATH COUNTY

Bullpasture River R,BR R,BR R,BR  
Jackson River R B,R,BR R  
Spring Run B,R,BR B,R,BR R,BR  
Back Creek\* R R R  
Wilson Creek Left Prong\* R R R  
Mares Run\* R R R  
Pads Creek (S.Fork)\* R R R  
Jackson River (Hidden Valley)\* R R,BR R  
Lick Run\* B B B

### BEDFORD

Hunting Creek\* R R R  
Battery Creek\* R R R

### BLAND

Hunting Camp Creek B,R B,R R  
No Business Creek B,R B,R R  
Lick Creek B,R B,R R  
Wolf Creek R,BR R,BR R,BR  
Laurel Fork Creek B,R R R  
Lick Creek\* R R R

### BOTETOURT

Jennings Creek B,R R R  
Mill Creek R R R  
Roaring Run R R R  
North Creek\* R R R  
Middle Creek\* R R R  
McFalls Creek\* R R R

### BUCHANAN

Hurricane Fork B,R B,R  
Dismal River B,R B,R R

### CARROLL

Little Reed Island Creek R,BR R,BR R,BR  
Stewart's Creek B,R B,R  
Big Reed Island Creek B,R B,R R  
Crooked Creek B,R R R  
Burkes Fork B,R B,R R  
Lovills Creek B,R R R  
Laurel Creek R,BR BR BR  
Snake Creek (Fish For Fun) BR BR

### CRAIG

Potts Creek R,BR R,BR R,BR  
Barbours Creek\* R R R  
Cove Creek\* B R R  
Lipes Creek\* B R R  
Potts Creek\* R,BR R R  
Broad Run\* R R R  
Schoolhouse Branch\* R R R  
North Fork Barbours Creek\* R R R  
S. Fork Barbours Creek\* R R R

### DICKENSON

Frying Pan Creek B,R B,R  
Russell Fork Creek R,BR R,BR R,BR  
Pound River R,BR R,BR R,BR

### FLOYD

Burkes Fork B,R B,R R  
Howell Creek B,R B,R R  
Rush Fork B,R B,R  
W. Fork Little River B,R R,BR R,BR  
Meadow Creek B,R B,R  
Laurel Fork B,R B,R  
Mira Fork B,R B,R  
Goose Creek R R R  
Little River R,BR R,BR R,BR  
Little River (Fish for fun) BR BR

### FRANKLIN

Maggodee Creek B,R B,R  
Green Creek B,R R R  
Runnet Bag Creek B,R B,R

### FREDERICK

Back Creek (Upper) B,R B,R  
Back Creek (Lower) B,R B,R  
Hogue Creek B,R B,R  
Cedar Creek B,R B,R R  
Paddy Run B,R B,R

### GILES

Stoney Creek B,R B,R R  
Dismal Creek\* R R R

### GRAYSON

Big Wilson Creek B,R,BR R,BR R  
Middle Fox Creek B,R B,R R  
Middle Fork Helton Creek B B R  
Big Fox - Upper B,R B,R R  
Big Fox - Lower B,R B,R  
Elk Creek B,R B,R R  
Peach Bottom Creek R B,R R  
Helton Creek R B,R R  
Turkey Knob Fork Creek B,R B,R





Period Stocked						Preseason	April	May	June
GREENE		Preseason	April	May	June	Briery Lake*	R	R	R
	Lynch River	B,R		B,R		Hone Quarry Lake*	R,BR	R	
	South River	B,R		B,R	R	RUSSELL			
	Swift Run	B,R		B,R	R,BR	Copper Creek	R	R	R
HENRY						Thompson Creek	B,R	R	R
	Smith River(Philpott)	B,R,BR		R,BR	R,BR	Laurel Bed Lake	B		
	Smith River (Bassett)	R		R		SCOTT			
	Smith River (Koehler)	R		R		Little Stony Creek	B,R	R	R
HIGHLAND						Devils Fork *	R	R	
	Bullpasture River	B,R		B,R	R	Straight Fork *	R	R	R
	South Fork Potomac River	B,R		B,R		Little Stoney Creek *	R	R	R
						Cove Creek *	R	R	R
	Back Creek	B,R,BR		B,R,BR		SHENANDOAH			
LEE						Passage Creek	B,R	B,R	R
	Hardys Creek	R,BR		R,BR	R	Big Stoney Creek	B,R,BR	R,BR	R,BR
	Martins Creek	R,BR		R,BR	R	Cedar Creek	B,R	B,R	R
	N. Fork Powell River	B,R		B,R	R	Mill Creek	B,R	B,R	
MADISON						Little Stoney Creek *			
	Garth Run	B,R		B,R	B,R	(Above Woodstock Res.)	R	R	R
	Hughes River	B,R,BR		R,BR	R,BR	Paddy Run *	R	R	R
	Robinson River	R,BR		R,BR		Cedar Creek *	R	R	
MONTGOMERY	Rose River	R,BR		R,BR		Peters Creek Mill *	R	R	R
						Tomahawk Pond *	R	R	R
	Tom's Creek	B,R		B,R		Little Passage Creek *	R	R	R
	South Fork Roanoke River	B,R,BR		R,BR	R,BR	SMYTH			
NELSON	Poverty Creek *	R		R		S. Fork Holston River(Gorge)	B,R,BR	R,BR	R
	Craig Creek *	R		R		S. Fork Holston River (lower)	B,R	B,R	R
	Tye River	B,R,BR		R,BR	R,BR	Big Laurel Creek	B,R	B,R	R
	N. Fork Tye River	B,R		B,R	R	Staley's Creek	B,R	B,R	R
PAGE	Stoney Creek	B,R		B,R	R	Middle Fork Holston River	R,BR	R	R
	S. Fork Tye River	B,R		B,R	R	Lick Creek (Upper)	B,R	R	R
	Cub Run*	R	R	R		Comers Creek *	R	R	R
	PitSpring Run*	R	R	R		Hurricane Creek *	R	R	R
PATRICK	Upper Passage Creek *	R	R	R		Houndshell Creek *	R	R	
						Dickey's Creek *	R	R	
	Dan River(below Powerhouse)	B,R,BR		R,BR	R,BR	Center Creek *	R		
	Dan River(above Powerhouse)	B,R		R,BR		Roland Creek *	R	R	
PULASKI	Rock Castle Creek	B,R		B,R		TAZEWELL			
	Round Meadow Creek	B,R		B,R		Wolf Creek	R,BR	R,BR	
	N. Fork Mayo River	B,R		B,R		Cove Creek	B,R	B,R	R
	S. Fork Mayo River	B,R		B,R		Laurel Creek	B,R	B,R	
RAPPAHANNOCK	Poorhouse Creek	B,R		B,R		Roaring Fork	B,R	B,R	
	Big Ivy Creek	B,R		B,R		Little Tumbling Creek	B,R	B,R	R
						Roaring Fork *			R
	W. Fork Peak Creek	B,R		R		WARREN			
ROANOKE						Gooney Run	B,R	B,R	
	Roanoke River	B,R,BR		B,R,BR	R	WASHINGTON			
	Tinker Creek	B,R		B,R		Whitetop Laurel	B,R,BR	R,BR	R,BR
	Glade Creek	B,R		R		Tennessee Laurel	B,R	B,R	R
ROCKBRIDGE						Green Cove Creek	B,R	B,R	R
	Mill Creek	B,R		B,R	R	Big Brumley Creek	B,R	B,R	R
	Irish Creek	B,R		B,R	R	Big Tumbling Creek	B,R	B,R	R
	South River	B,R		B,R		Valley Creek	B,R	B,R	R
ROCKINGHAM	Elk Creek *	R		R		Straight Branch *	R	R	R
	Back Run*	R		R		WISE			
						Middle Fork Powell River	B,R	B,R	R
	N. Fork Shenandoah River	B,R		B,R	R	Mountain Fork *	R	R	
RAPPAHANNOCK	Dry River	B,R		B,R		Burns Creek *	R	R	
	Briery Branch	B,R		B,R		Clear Creek *	R	R	
	Silver Lake	R		R		Machine Creek *	R		
	Boones Run*	R		R		High Knob Lake*	R	R	R
ROANOKE	Shoemaker River*	R	R	R		WYTHE			
	Blacks Run*	R	R	R		E. Fork Stoney Creek	R	R	
	Gum Run*	R		R		Gullion Fork Creek *	R	R	
	Skidmore Fork *	R		R		E. Fork Dry Run *	R	R	
ROCKINGHAM	Slate Lick Run *	R	R	R		W. Fork Dry Run *	R	R	
						W. Fork Reed Creek *	R	R	
						Gullion Fork Pond *	R	R	R



**HUNT SEASON CHANGES PROPOSED.** Some 300 persons attended the Game Commission's annual hearing on game law changes in Richmond, February 24, 1978.

Among the proposals to come out of the meeting were more liberal deer limits and one hen turkey in the fall for Eastern Virginia.

Deer seasons west of the Blue Ridge remained basically unchanged. In the east, a three deer season limit was proposed for Powhatan, Amelia, Chesterfield, Dinwiddie, Prince George, Surry, Isle of Wight and Fairfax counties and for Suffolk City. Two does taken on separate days would be legal in all counties east of the Blue Ridge during the respective "doe days" allotted to each county. Other changes included an 18 day doe season proposed for Lancaster, Northumberland counties and Richmond County south of Rte. 360. A proposed increase from 3 to 6 days doe season was made for counties in the Southern Piedmont. Also included was 2 days of doe shooting on both sides of the dog line splitting counties from Nelson through Pittsylvania plus Bedford.

A bag limit of two turkeys per year, one of which may be a hen in the fall, was proposed for those Eastern Virginia counties where fall hunting is allowed. Russell Co. in Southwest Virginia would be closed to fall turkey hunting due to low kills.

Coon and fox hunting and trapping season recommendations provoked the most discussion. High fur prices have hunters and trappers jealously fighting for their appropriate "share" of the harvest.

Changes proposed include a raccoon trapping season east of I-95 from December 15, 1978 to March 10, 1979 and a fox trapping season for the same area from December 15, 1978 thru January 31, 1979. In Southwest Virginia, December 1, 1978 through January 31, 1979 trapping dates were proposed for foxes.

Proposed hunting season changes would restrict coon hunting on the George Washington National Forest and nearby public lands to November 1, 1978 through December 31, while in eastern Virginia coon hunting would extend from October 1, 1978 through February 28, 1979.

Fox hunters in southwest Virginia would face a restricted December 1, 1978 through January 31, 1979 taking season while in the George Washington National Forest and nearby public lands, the fox season would be expanded to November 1, 1978 through January 31, 1979.

The proposed regulations will be acted upon at the Commission's April 14th meeting.

**STAUNTON RIVER BILL PASSES!** House Bill 154 has at press time passed both the House and Senate and needed only Governor Dalton's signature to designate the Staunton a scenic river. The bill had much local support and its passage will prevent an extensive damming project proposed for the river. Scenic river status will also save the annual run of spawning striped bass which, according to biologists, would have come to an end with the building of the dams.

**PELLET GUN MANUFACTURER RECALLS PRODUCT.** The Crossman Arms Company of Fairport, New York has recalled some 35,000 pellet pistols which may discharge without warning. The guns were identified as model 1337 American Classic and model 1322 Medalist. Both the company and the Consumer Product Safety Commission issued a warning urging owners to take the pistols to an authorized service center before firing the gun again. These pellet pistols were manufactured in 1977. Guns made after January, 1978, are not affected.



# KESTRELS: BUILD A HOUSE FOR HAWKS

Virginia is fortunate to be a breeding locality for the American kestrel or sparrow hawk, the smallest and brightest member of the falcon family. In addition to its beauty, the kestrel is valuable, as its diet primarily includes mice and insects. Many kestrels winter in Virginia and move north in the spring. But around February, other kestrels return from the south to nest in Virginia. The kestrel is the only member of Virginia's falcons and hawks that is a cavity nester and that can be attracted to a box.

The rural type sawmill seems to be the best place to get the 8 foot board. Such a mill usually has rough cut, dried lumber (pine is best) at prices less than building supply houses. Rough cut boards are best, as they are usually full thickness, stronger, and more rustic. Square one end of your board, and cut the 22" back, two 16" sides, and one 16" front. Save the rest of the board for later. A power saw will save you a lot of work when you cut the board.

Cut the back cleat from the strip so it will fit between the sides, and bevel the upper edge a little. Position the cleat 5" from the top of the back and nail it with three of the 2" nails. Use the rest of the strip for the front cleat, and nail it with two of the 2" nails so its edge is even with the top edge of the front. In nailing the cleats, drive the nails from the cleat side so no nails protrude inside. If any points do protrude, hammer them down.

Drill a hole through the back about 2" from the top for the lag screw. Cut the 3" entrance hole in the front and smooth the edges a little. It's important that these holes be made after nailing the cleats so you don't split your pieces.

Now you're ready to nail the four pieces. The easiest way is to place the

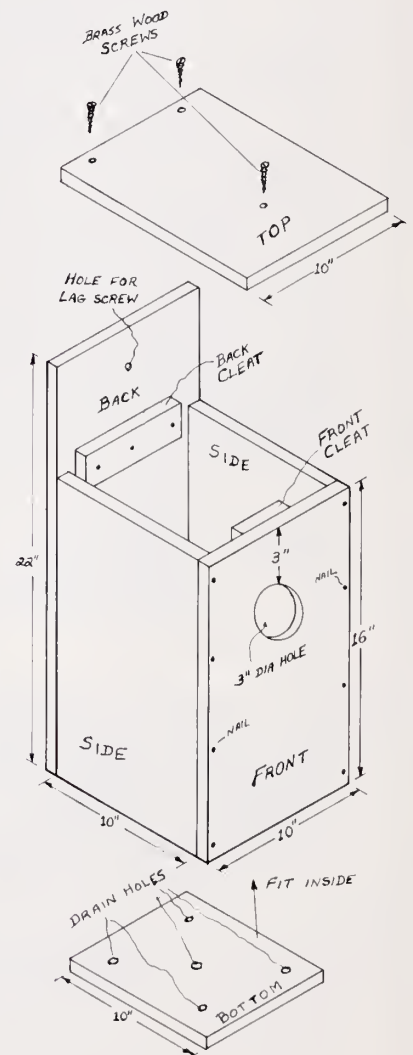
edges of the two sides on a solid floor and place the front on the sides with the cleat facing down. Someone holding while you nail will help here. Also, drilling pilot holes (of somewhat smaller diameter than the 3½ inch nails) will insure better nailing and less splitting. Nail the front to the two sides with four 3½ inch nails on each side. Then turn the nailed pieces over so the front is flat on the floor and the side edges extend up. Place the back on the sides, being sure the back cleat is facing down and at the same end as the front cleat. Nail the back to the sides with four 3½ inch nails on each side.

At this stage, you should have a strong house. If it isn't, drive a few more nails. If the house is a bit out of square, don't worry. The kestrels will still like it. Next, measure the inside dimension between the sides and cut a piece from your remaining board to fit and form the bottom. If you've made the house correctly, your bottom should fit with the grain running from side to side. Drill about five ¼ inch drain holes through the bottom, position it flush inside, and nail it with two 3½ inch nails from both the front and the back (not from the sides into the end grain).

Measure the length needed to give the top about 2" overhang at the front and cut it from your board. Bevel the back edge so it fits well against the back. Position the top and drill two holes through the top and back cleat and one hole through the top and front cleat for the brass wood screws. Run the screws in and out once to be sure they fit properly. This is a help when you put the top on your located box. With the top in place, there should be a 1" ventilation space at the rear and the top should slope down toward the front. Don't paint or spray your house. It's more natural and better for the

The accompanying drawing of a box is almost self-explanatory. But for your first one, some explanation may be helpful. To make one box, you'll need:

- One 1" x 10" (or 12") x 8' board
- One 1" x 2" x 12" wood strip
- Twenty 3½" coated nails
- Five 2" coated nails
- One 4" lag screw and washer
- Three 2" brass wood screws





kestrels. Also, don't provide any perch. The kestrels don't need it and it will only attract starlings.

Now that you've built a house, where do you put it? If you've seen any, then find an area where mice and insects would live. Rural areas are probably the best--but I've had kestrels nest in built up, inner city areas, on a small farm, and in cleared areas around manufacturing plants, all within the city of Lynchburg. But don't forget yourself, and your ease in being able to watch the house. I had a very successful house where I could watch it from my office window. Once you pick an area, put your house on a lone tree in a field, or on a tree at the edge of a field. Kestrels like their house 20 to 25 feet from the ground and facing east or south, kestrels also like a clear flyway, so the space in front should be free of limbs and obstructions. After you pick your tree, place a ladder and look at the flyway from 25 feet up. If it looks clear, drill a hole for the lag screw and run the screw in and out with a wrench to make sure you can fasten the house while you hold it up there. You'll need a little strength and nerve to hold it and tighten the lag screw at the same time, but you can manage. After fastening the house securely, put about 3" of coarse sawdust or wood chips in the bottom. Kestrels don't add any nesting material. Then fasten the top with the brass screws. Also, it's important to remove all vines and limbs below the house that could make it easy for snakes to climb on and investigate the house. Some people wrap sheet metal around the tree.

Once you've placed your house, observe it from a distance only, so your scent doesn't attract predators like opossums or raccoons who would climb up to investigate. In most areas of Virginia, your house should be up by early spring, as kestrels start mating about that time. If kestrels move in, don't bother them. You'll be able to see what goes on from a distance. Kestrels lay from four to six eggs



*Sparrow hawk by Rockne Knuth.*

over a week or two. Incubation takes about 28 days, and the young leave the house about 30 days after that. They stay in the area for a month or more, being fed some and learning how to fly well. Then, they disperse.

Hopefully, you'll try your hand at kestrel house building. It will be most rewarding, not only for the thrill you'll get in watching them, but also for the benefit they will bring to the area. You'll learn a lot of natural history about kestrels, such

as their graceful flight ability, their funny habits like always perching on the same twig, preening at the same time every day when the young seemingly should be fed, and their fierce spirit in driving other birds like red-tails away. If you do have kestrels nest, be sure to clean the box and put in fresh sawdust the following February. But if you don't get kestrels, enjoy whatever does move in, as it will leave a house somewhere else for the kestrels.



## *Spring on a Fifty-Foot Lot*

*It's hard to believe this  
is a common dandelion !*

*By Jean Thompson*

*I* bought the smallest house I could find in a close-in, convenient, good neighborhood.

*I didn't really want to leave my wooded acre in the suburbs. But I was going to be living alone, and I didn't need a 72-foot-long house.*

*The yard at the new house looked bare, with only two spindly young trees, a few base plantings, and not much grass. But I can do something about that, I thought, whereas I couldn't change a floor plan or a neighborhood.*

*So I moved in the fall, planted the five dogwood seedlings I'd brought from my woods, and waited for spring.*

*Little did I dream that when spring came I'd find 36 kinds of wild-flowers on my 50-foot city lot!*

*Not everyone would call them flowers. Some of them even I would admit are weeds. But most of them are in Peterson's FIELD GUIDE TO WILDFLOWERS, and that's authority enough for me.*

*The first flower I found was bittercress. Its white, 1/16-inch blooms dotted the yard in March when almost everything else was still brown. Then green spikes began developing on the cress plants. And then I began getting an invasion of what seemed like tiny insects that jumped in swarms as I walked through the yard.*

*(Continued on page 21)*





Bird's eye speedwell (above) was a new flower that popped up while blue eyed grass (below) was a familiar flower that came along.



I remember butter-and-eggs as my favorites when I was a child on my father's farm.

Sheep sorrel with its bright red leaves came in early spring.







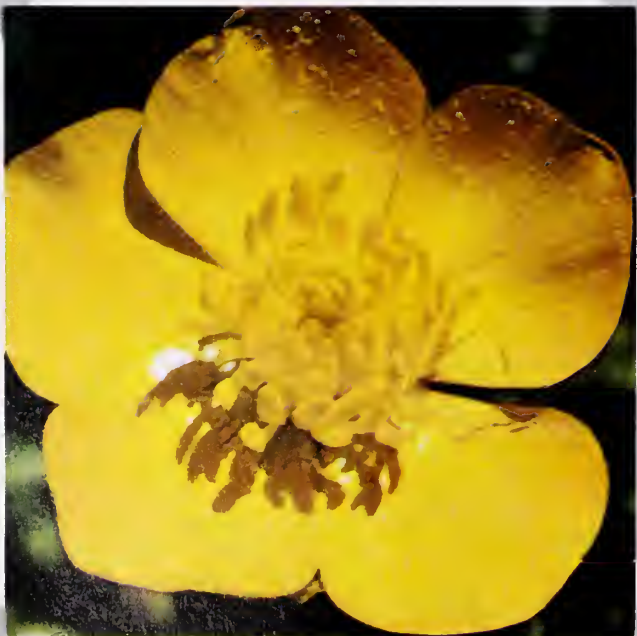
*I saw henbit everywhere.*

*If I had to pick a favorite,  
I'd pick the common buttercup  
as being the most spectacular  
plant on my lot.*



*Rabbit's foot clover came  
along as spring progressed.*

*I have to admit that I'd  
be happy if I never saw  
English plantain again.*





(Continued from page 18)

*I got down to look more closely, to see what kind of insects were everywhere. As I brushed the foliage with my hand, I saw that they weren't insects at all, but bittercress seeds!*

*There were lots of dandelions, too, and common blue violets were indeed common. Other flowers that came along early included common and mouse-ear chickweed, vetch, sheep sorrel, and buttercups.*

*Even though I find the buttercup spectacular, a friend of mine tells me that he can't stand the sight of them. He raises cattle and he tells me that cows won't touch buttercups. They'll eat everything else around them and leave the buttercups to thrive.*

*Other familiar flowers arrived: field pansy, yellow wood sorrel, blue-eyed grass, Indian strawberry and white and smaller hop clover. The clovers made nice ground cover between the sparse patches of grass.*

*Among the familiar flowers to me were four kinds of speedwell, some of their blooms barely visible from eye level. Two flowers that I hadn't seen before but now saw everywhere, were purple dead-nettle and henbit.*

*I am grateful to the builder who didn't do a very good job of establishing a lawn on the place, as it gave me the chance to see and photograph so many different kinds of wildflowers without ever leaving home.*

*I found it hard to believe that star-of-Bethlehem blooms I found weren't escaped garden flowers. But Peterson included them, so I did too!*

*Cat's ear is a weed I'd like to clear my lot of and I would be happy to never see English, common, or Virginia plantain again. But Peterson says plantains are flowers, so I guess I can put up with them.*

*Among the many flowers that came along with the advance of spring included poor-man's-pepper, rabbit's-foot-clover, horse nettle, flea-bane daisy, curled dock, common morning glory, and butter-and-eggs. The latter is a plant that I have loved since childhood, but it seems that I appreciate them even more now, since the only place I have for wildflowers is my small city plot.*

*Two of the plants on my lot were mysteries which needed the help of an expert to identify. The almost microscopic, four-petaled white flower turned out to be buttonweed, relative of the bluet. The coral flower with wild-geranium-like foliage was actually a member of the mallow family. Its habit of coming out in full bloom only in bright sunlight was what finally established its identity.*

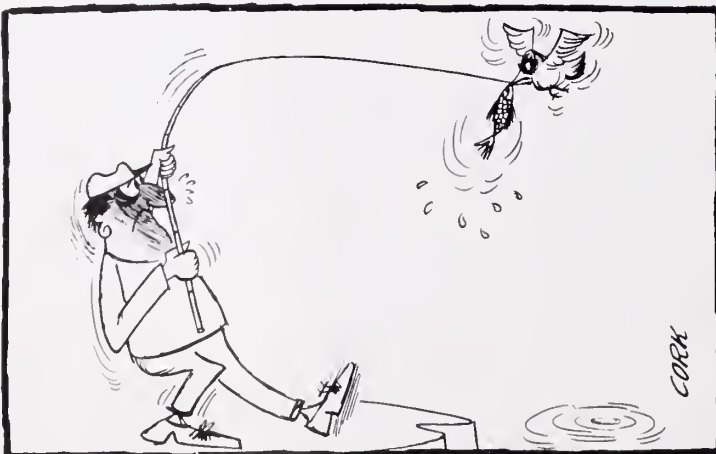
## GUAN GONE..... FOR A HUNDRED YEARS!

The white-winged guan, *Penelope albipennis*, thought to be extinct, has been sighted again by an ornithologist and a Peruvian villager. The guan, a bird slightly larger than a ring-neck pheasant, was last seen in 1877. The 'rediscovery' took place in northwestern Peru, where Dr. John O'Neill, a Louisiana State University ornithologist, has been conducting research for 16 years. An area resident told O'Neill that he had seen the birds near his garden. O'Neill verified the sighting in September, when ten Guans were seen. The Guan population may be in the hundreds, the researcher said.

## Q U I E T !

Allentown, PA, has launched the nation's first Quiet Community Program to demonstrate a comprehensive approach to noise reduction. The Allentown city government, assisted by the U.S. Environmental Protection Agency, will enact new noise control laws and tighten enforcement of existing laws. Allentown was chosen to initiate the program because of its interest in solving noise problems. The Quiet Community Program will include nine other communities during the next two years.

Had an outdoor adventure lately? If you have, write to Wildlife Kaleidoscope and tell us all about it. Send us your photos too!



Carver Gary P. Trout at work in his studio

More than forty artists, carvers, and photographers will display their works presenting a variety of views of nature in the exhibition "The Artist As Naturalist," scheduled April 29 & 30 from 10 a.m. - 5 p.m. at the Peninsula Nature and Science Center in Newport News, Virginia.

The invitational exhibition is being presented to provide the public with an opportunity to encounter varying interpretations of the beauty and drama of nature as it is captured by outstanding regional artists in a wide range of artistic mediums.

Artists and carvers will come from the Eastern portion of Virginia, from Richmond to the coast and the Eastern Shore. Among those who will be exhibiting at the Nature Center during the show are well-known carvers of wildlife: Tad Beach, George and Elsie Bryant, George Crosson, John Harlow, III, Bill Hilliard, Mary Lou Powell, James Hutcheson, James F. McInteer, III, Gary P. Trout, and Lynn Forehand. Photographers include Curtis Badger, John A. Fahey, and Archie Johnson. Among exhibiting artists are Mary Artrip, Durant Ball, Dave Bruner, Robert Clontz, Nina Cox, William Crockett, Stephen L. Elliott, Fred Gibson, Herb Jones, James Warwick Jones, Carl "Spike" Knuth, Jane Lockwood, John P. MacLeod, Grace Pan, William Redd Taylor, C. S. Tucker, and Dr. Barry Quentin Walker.



## COAST GUARD'S DEER'S LIFE

Virginia whitetail deer, unaccustomed to the sub-freezing weather that gripped the state during the cold winter of 1977, got into some real perplexing situations. Even the Coast Guard had to come to the rescue of one animal floundering in the icy waters of the James River between Richmond and Hampton Roads.

The mission of the Coast Guard bouy tender, Red

Birch, was to break the ice and keep the shipping lanes open for the busy river traffic that plies the James. The vessel, crunching ice en route to Hampton Roads, came upon a whitetail buck thrashing in the water and trying in vain to climb upon an ice floe.

Finally, Fireman Kevin McDonnell, a crewman and experienced scuba, donned his wet suit, grabbed a rope and a stretcher, and hit the icy waters. But his efforts to get the thoroughly frightened animal on the stretcher were unsuccessful.

Undaunted, McDonnell tied the rope around the animal and signalled his mates to haul it aboard the tender.

"The deer's ears were frozen and his belly was all iced up," said Lieutenant George Naccara, skipper of the tender. "He was so weak he couldn't stand, and his antlers were broken off.

The crewmen took the deer below decks to the warmth of the engine room, but had to tie its mouth to keep it from biting, and bind its feet to prevent its beating its head against the deck.

The cold and scared deer was revived considerably on the voyage to Hampton Roads where it was turned over to Warden Sidney Akers of the Virginia Commission of Game and Inland Fisheries.

*Bob Gooch*



*Mrs. Richie Nuckols of Lexington sent us this picture of her father, age 75, and the 10 point buck he killed in Rockbridge County last season.*

## TACKLE BOX TIPS



It is surprising, but true that there are a growing number of adults who never have been fishing in their lives. It is a result of the gradual urbanization of America.

Now these persons, with leisure, are suddenly interested in fishing. But they don't know how to begin. A tackle store is a maze. What kind of rod to buy? What reel? Which lines? Hooks? Sinkers?

An easy way is by using two books, both inexpensive and pocket-size. One is "Secrets of Successful Fishing," by Henry Shakespeare; the other is "Fishing Tackle and Techniques," by Dick Wolff.

Later, the new fisherman can enlarge his library with specialized writing about his favorite fishing.

It's an investment in the future.

Courtesy UMCO Corp.

Coming next month ...

### Cruisin'...

Writer-photographer Curtis Badger gives us a glimpse at Virginia's Intracoastal Waterway.

### Poisonous Plants...

Are there really deadly plants in Virginia?

### Sallie Middleton...

Her engaging wildlife art is colorful and charming. A look at this artist and her work.

### Carvin's Cove...

This scenic area provides more than just water.

# TRIAL BY CANOE

BY CARL CAHILL

My first trip on the Nottoway left me with two distinct impressions of white-water canoeists: they seldom agree on anything and they are extremely reticent about imparting information to newcomers. For example, if there are five passages through rapids you'll get five opinions as to which is the best. Further, it seems that someone in the five canoes which bumped down the Nottoway from near Doodlum (population 22) to county road 619 in May would have told me that sooner or later I'd have to get out in the river and push. But I'm getting ahead of my story.

Some time ago two architects of dubious friendship, Jim Greham of Norfolk and Howard Wright of Chesapeake, suggested organizing a two-day canoe and camping trip on the James River from Clifton Forge to Big Island. (The James is THE river in Virginia, running clear across the state to Hampton Roads and the Chesapeake Bay.)

I countered with a suggestion that we canoe the Nottoway on a one-day trip since it would be better for us novices to bust up our canoes closer to the comforts of home.

The Nottoway snakes from Central Virginia south-eastward into North Carolina where it becomes the Chowan River. My architect friends sought the counsel of the bearded patriarch of white water men, Lee Fry, who told them the Nottoway is definitely not for novices. (He differs with Randy Carter who in his book on Virginia rivers described the Nottoway as "mild" with no danger points.)

Fry, who is chairman of the Portsmouth School Board, and who is such an avid white-water canoeist that he breaks the ice on rivers in winter to engage in the sport, said the James at Clifton Forge is better for novices.

My friends and I parted company, they to canoe the James and me to canoe the Nottoway at the invitation of J. Hume Taylor, Jr., a young Norfolk attorney.

We met, as rain started to fall, at the Sportsman Restaurant in Emporia, 13 people with 4 aluminum canoes and I (mine) made of fiberglass from a kit. Joe Blumber of Newport News, who with his wife was to lead us, expressed some misgivings about a fiberglass canoe and promptly launched into a story about one being smashed to bits on a similar trip down the Not-

toway. My palms started to sweat. Taylor tried to reassure me. "Ah, it's not that bad."

We set out for the take-out point, just below the Route 619 bridge, left my car at Taylor's, and drove to the put-in point at the end of a red dirt road near Doodlum. The rain had increased slightly. I'm from red dirt country myself and I knew that if someone spit on the road the cars would sink immediately to their hubs in mud so I suggested the cars be left at the top of the last hill leading to the river. It was the only good suggestion made all day.

As we unloaded our craft, Taylor's 10-year-old daughter, "Cree," looked mine over and said, "I've never seen a canoe like that." We looked at the dismal sky and the equally dismal river and I kept hoping someone would offer me a bit of advice about canoeing in white water. (I'm an old hand at canoeing up creeks, on canals, in surf, behind tugboats and on placid rivers and lakes but I had never been in white water before.)

Ben House of Virginia Beach, his 13-year-old daughter and her 13-year-old friend, proved the gutsiest of all, being complete novices in canoes anywhere.

With Joe Blumber in the lead (and wearing a diver's wet suit, a sure tipoff of things to come) and the rain coming down harder as we slipped away from shore and into the first rapids where my wife (in the bow) and I promptly hung up on a rock. Over the side I went and shoved us off. (The air temperature at 52 degrees was colder than the water and I hated to get back into the canoe.)

From then on it was rapids, rapids, rapids with House and his girls flipping over, Fred Glanville of Norfolk and his 13-year-old son and his 13-year-old friend, slipping over, me shivering, everybody hanging up on rocks, the rain falling harder so it really didn't matter whether you were in the river or out.

My wife followed my every instruction. "Back paddle!" I'd shout and she'd back paddle. "Stop!" and she'd stop. "Paddle on the right!" and she'd paddle on the right. And so it went. We shot rapid after rapid and I quickly concluded that Randy Carter didn't know what he was writing about (his article on the Nottoway was taken from someone else's notes) and Les Fry did.





*Illustration By Diane Grant*

The river is not for novices. Take it from a novice.

Joe Blumber led the way, pointing out the obstacles, being second-guessed by the people in the canoes behind him, considerably returning like a shepherd after each difficult passage to see that all his sheep made it through safely. When they didn't make it he got out and helped right the canoes and salvage flotsam and jetsam.

There were more rapids and my wife and I hung up once more while trying to complete an "S" turn (my canoe has a one-inch keel) and doesn't pivot easily), and then we were under the 619 bridge. Another debate started over whether the take-out point was above or below the last set of rapids. Joe found the take-out point below the rapids and we put in for shore.

Quickly I hauled my fiberglass canoe out and flipped it over to look for damage. There was none. My traveling companions presumably are still pounding the dents out of theirs. This isn't to say fiberglass is better. Aluminum is best for rocky waters. Unless, of course, the fiberglass is being steered by two highly-skilled novices.

Meantime, the rain had turned the red clay into gumbo and Taylor's car slid into a ditch, Fred Glanville's truck slid into a ditch, and Joe Blumber's four-wheel drive vehicle slid into a ditch. After mating the four-wheel drive vehicle, tire chains, bumper chains and the other stuck cars in various ways with each other we finally wrenched all of them from the clutches of the red mud.

Meantime, my architect friends on the James put three canoes in just north of Eagle Rock and paddled about 25 miles down stream to Indian Rock, hitting a lot of little rocks in between. But, while breaking two paddles, there were no upsets, proving Les Fry right once again.

In the course of struggling through the white water (and pushing cars out of the mud) I learned there are two groups of white-water canoeists in Virginia. One is the Float Fishermen of Virginia (FFV), a statewide organization made up of local clubs. The name suggests peaceful anglers drifting along quiet streams in a canoe. The members may engage in such pursuits but they are fanatical about shooting rapids. Peter Rowe, a Norfolk attorney, is president of FFV. The other group is the Coastal Canoeists who, as Les Fry smugly puts it, "seek heavier water" than the FFV, a statement that is likely to precipitate much rivalry. The Coastal Canoeists are found primarily in the Eastern part of Virginia, although members can be counted from many other sections of the state. The president is Mike Carey of Virginia Beach. Some canoeists belong to both organizations.

In inquiring further into white-water canoeing I found one point of agreement. Peter Rowe agrees with Fry about the Nottoway. "It's not for novices," says Rowe. "But it's a good training river."

So if you want to get your feet wet in white-water canoeing, seek out a Float Fisherman or Coastal canoeist. They love company. Soaking wet company.



# THE HOGNOSE ...A CHARMER?

BY J. STEPHEN CONN

It's not his upturned pug nose that causes the hognose Snake (*genus Heterodon*) to be referred to as a ham. That is there for burrowing after toads, his favorite food. He is a "ham" because nowhere in all the reptile kingdom is there found a finer actor. Three species of the hognose occur in North America, the Eastern, Southern and Western. The snake pictured here is of the Eastern variety and was photographed on a mild October day on the Appalachian Trail on the side of Black Hook Mountain in the Shenandoah National Park.



ACT I opens with a start and a quick catch of breath from the audience (me). There is always a moment of alarm in encountering any snake on the trail, until it is identified as being harmless. This one is blotched with a pattern of black and brown and cream, a perfect camouflage among the leaves and pebbles of the trail. A dark phase also occurs which is all black above, except for white lips. The surest point of identification is the upturned snout. No other American snake has it. Adults may range from 1½ feet (as the one pictured) to 2½ feet. The record is 45¼ inches.



ACT II begins the moment the snake feels threatened, as here when I put my camera lens to within 10 inches of him. First he flattens and spreads his head and neck like a cobra spreading its hood, hence the common name spreading adder or puff adder. Seconds after the camera clicked this picture the snake was puffing and hissing and undulating so wildly that the camera could not focus on him. At first he tried to escape, but after I grabbed and threw him back on the trail a few times he gave up the effort. He made no attempt to bite.

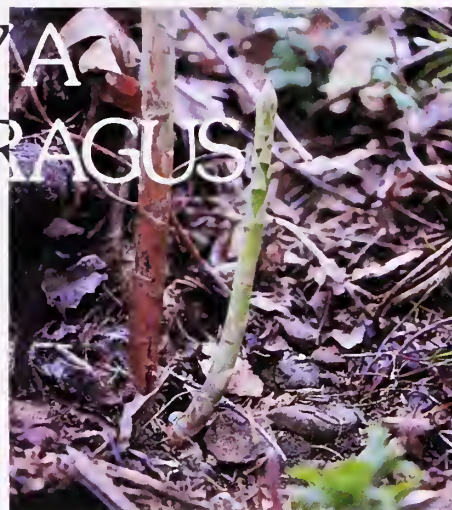
ACT III commences the moment the hognose snake realizes he can't escape and his foe can't be frightened away. He plays dead. But it isn't all that simple. He doesn't just flop over dead in an instant. He does it in grand style. Writhing and wiggling for a full minute or more, he hams it up like a kid playing cowboys who loses in a make-believe duel. This one died with his belly in the air and his tongue lolled out in the dust so realistically that a fly came and landed on the edge of his gaping open mouth.

ACT IV gives away the 'possum' trick that the Hognose Snake is playing. As I repeatedly picked him up and turned him over, he revived just long enough to flop back over on his back as dead. His insistence on dying on his back is a dead giveaway.

The show is over now so I leave the hognose on the trail and hike on up the mountain. But before I have taken too many steps away, I look around to see that he is gone.



# STALKED BY A WILD ASPARAGUS



Not too many years ago, the only asparagus that found its way to our table was that purchased at the local supermarket or else it was acquired from a domestic asparagus patch. For years, I watched with envy as many of my friends brought in the tender young spears of the wild asparagus, but I always came home empty-handed after a search. Regardless of how hard or how long I searched, I just couldn't seem to locate these inconspicuous shoots.

Then while mowing my lawn a couple of years ago, I kept getting the feeling that I was overlooking something each time I passed by a certain spot along one of my fence rows. I couldn't put my finger on it, but after years of searching for wild foods, I had developed sort of a sixth sense for noticing certain wild plants of value; that is, those that may be used for food or else sold for their medicinal qualities. So the next time I passed by this spot, I stopped the mower and had a closer look.

The tan-colored dried stalks were the first thing that I noticed; those with the feathery dried leaves from the previous year's growth. Then I noticed several greenish-purple shoots--about two inches high--scattered around in the ground at the base of the dried stalks. Sure enough, I had located my first bunch of wild asparagus plants right in my own back yard. I had apparently been stalked by a wild asparagus plant for a year without noticing it.

I studied these plants, took photos, and made mental notes of every detail I could notice about them. Now when the delicious young spears make their appearance between the middle of April and the latter part of May each year, I can easily locate them by looking for the tall (up to 5 feet) stalks from the previous year's growth. The edible green shoots will be growing out of the ground at the base of the dried stalks. However, they're sometimes difficult to notice since they are

often covered by leaves and grass. They are found growing along fence rows, railroad tracks, and similar places all over the United States.

Once you have located and identified your first wild asparagus plant, you'll have no trouble finding the shoots from that time on. Besides being rich in Vitamin C, you'll find that the flavor of the tender young asparagus shoots far surpasses those purchased from your local grocery store-- either canned or "fresh." The searching for the wild varieties can also become an entertaining sport for the entire family while hiking or camping.

We always cut the asparagus spears just above the woody part of the shoot to ensure tenderness. However, if you do happen to get some older, woody spears, they may be peeled before tying the spears into bundles, and then boiled in salted water for about 10 minutes or until tender. Don't overcook. Serve them hot with melted butter, salt and pepper, and a dash of summer savory.

When entertaining guests, wrap each cooked spear with a slice of buttered sandwich bread (with the crusts removed) and secure with a toothpick. This makes a fantastic hors d'oeuvre. Or if you want to get a bit fancy, slice the raw asparagus stalks on the extreme bias, so the slices are about 1/4-inch thick and about 1 1/2-inches long on the bias. Then heat 1 tablespoon of olive oil in a large skillet and add 3 cups of the cut asparagus. Sprinkle on a half teaspoon of salt, the same amount of monosodium glutamate, and a dash of pepper. Cover the skillet and shake over high heat for about 4 minutes--just like popping corn. You can add a dash of ginger if you like, or better yet, if you should happen across some of the wild ginger plants

while on your asparagus safari, dig a half dozen of these and add to the skillet while cooking the asparagus.

The importance of knowing what you're looking for cannot be over-emphasized. Perhaps a neighbor has a patch of the "tame" asparagus growing so that you can have a look-see. Maybe you know an asparagus hunter who can take you along on his next outing. Next to actually seeing a live asparagus plant growing in the wild, color photos are the next best way of getting to know the plant.

My family and I drive along country roads...those where it's rare to see more than two or three cars in an hour's time. My wife and youngest daughter look for the dried stalks on the right side of the road while my other daughter watches on the left side of the road. Since most of these plants will be growing on the Highway Department's right-of-way, we only have to get permission from the department and not from any landowners to gather the plants.

When hiking or camping near one of the many seldom-used railroad tracks during the spring of the year, many people undertake an asparagus safari--looking along the railroad company's fence for the plants. This is one of the best places I know of to find an abundance of wild asparagus in the shortest possible time. But always check with the local railroad authorities to make sure you're not breaking any laws.

# PH UNDERSTANDING THIS VALUE CAN HELP YOU FIND FISH



*This electronic meter is used to determine the pH value of water.*

BY BILL WEEKES

**T**his spring thousands of test cases will be tried. The judges and juries will be armies of largemouth bass nimrods. The prosecutors will be those die-hards insisting that the old ways of finding fish are the best. The defendant will be an ichthyologist from the University of Oklahoma.

Last summer a theory came to light

which stated that the pH of a pond or lake, its degree of acidity or alkalinity, best determines how to locate the elusive black bass. It is a factor even more significant than the water's temperature or oxygen content.

After eight years of study, Dr. Loren Hill concluded that pH is 50 percent more reliable than oxygen content and 30 percent more reliable than water temperature in predicting the location of Ole Bucket Mouth.

Dr. Hill, who experimented with bass swimming in a large tank, in a 25-acre pond, and in Lake Texoma near the Texas-Oklahoma border, stated the ideal pH level for black bass is slightly alkaline, falling between 7.5 and 7.9 (7.0 is neutral). This seems reasonable. The pH of black bass blood is 7.6. The pH level is vital. It influences a fish's metabolism and oxygen-using capabilities.

This fall fishermen would be able to measure the pH level of lake and pond sections. At that time Lowrance Electronics of Tulsa, Oklahoma was to have marketed its \$200 "pHish Meter."

Just as temperature is a measurement in degrees of heat (or lack of it), pH is a measurement, on a scale of 0 to 14, of water acidity or alkalinity.

What does being acidic or basic mean? It has to do with "ions". Ions are atoms, groups of atoms, or com-

pounds. They are electrically charged as a result of the loss or gain of electrons. Ions are disassociated parts of molecules. A molecule of water, as we all know, is designated  $H_2O$ , or to be more accurate,  $HOH$ . Water molecules disassociate into hydrogen ( $H$ ) and hydroxyl ( $OH$ ) ions. These ions are written as  $H^+$  and  $OH^-$ . A pH reading indicates whether or not water has a preponderance of  $H$  over  $OH$  ions. If there are more  $H^+$  the water is alkaline, or basic.

Where does the pH scale of 0 to 14 come from? What does the symbol "pH" mean anyway? To answer these questions one must focus on the work of a Danish chemist, Soren Peter Lauritz Sorensen. He coined the symbol "pH". He used the "p" from the Danish work "potenz" (power) and the "H" to stand for the hydrogen ion. The symbol pH is a measure, then, of the power, or concentration of the hydrogen ion in any system (solution), such as ponds, lakes, rivers, streams, estuaries, and oceans.

Where do the numbers on the scale of 0 to 14 come from? Water has three things: hydrogen ions, hydroxyl ions and molecules ( $HOH$ ). Pure water is "neutral". It is neither acidic nor basic and its pH is 7. Smaller numbers mean more acidic while larger pH ratings indicate more basic.

On any day, the hydrogen ion concentration will fluctuate in different parts of a lake or pond. This means that if the pH of the water were the only variable to consider, the feeding habits of the largemouth would fluctuate with the pH. Traditionally fishermen have found greater success finding the black bass along shorelines at dawn or dusk rather than during the heat of the day. Does this jive with pH fluctuations? In other words, is the pH level more "comfortable" for bass at dawn or dusk rather than during times of brilliant sunlight?

During the day partially submerged shore plants carry on "their business" of producing food by photosynthesis. The process is familiar to any school boy: the plants use carbon dioxide + water + light and chlorophyll to make sugars (for growth and metabolism) + water + oxygen. The important point here is that carbon dioxide ( $CO_2$ ) is being used up from the water



during the day while the oxygen content is increasing. This is significant because  $\text{CO}_2$  compounds in the water act as a buffer. They resist change in water pH, acting to keep  $\text{H}^+$  ion concentration of aquatic communities near neutral (pH 7.0). If the source of these carbon compounds,  $\text{CO}_2$  is being consumed during the day, the pH in the water will change.

The Hill experiments indicate that the reason bass shy away from shallow water during the day is *not* because they want to avoid the glare of the sun; rather that bass evacuation stems from a change in water pH. One might hypothesize that in deeply shaded areas, or during heavy overcast days bass fishing is better along the shore because photosynthesis is not as intense, and that bass are more comfortable, and are more likely to bite. At any rate, during times of high photosynthesis, the waters rise in alkalinity and in pH.

As the sun goes down and during hours of darkness, the  $\text{CO}_2$  level again rises in the water, and the pH (and alkalinity concentration) drops. During these times plant respiration replaces the food producing process. One by-product of respiration (the using of sugars for energy) is  $\text{CO}_2$ . Hydrogen ion concentration is clearly related to  $\text{CO}_2$  production.

This increase of dissolved  $\text{CO}_2$  is not only significant in producing a more comfortable fish environment, but also in providing a supply of  $\text{CO}_2$  for the next day's photosynthesis. But there is a delicate line between benefit and harm in the amount of  $\text{CO}_2$  present in aquatic systems. High concentrations of  $\text{CO}_2$  is associated with low concentrations of oxygen and fish can die off from sparse oxygen no matter how "comfortable" the pH level for them.



Carbon dioxide, which is extremely soluble in water, is not only made available by plant and animal respiration, but by decay of submerged organic material and from soil. A fish will get its oxygen from photosynthesis and diffusion of atmospheric oxygen into the water.

You can see that natural conditions in a body of water, even by the simplified restrictions of variables in the above discussion, fluctuate. Air and water temperature, rain runoff, physical habitat, the concentration levels of other nutrients, the concentration of fish populations and many other variables in an aquatic system also fluctuate to varying degrees within a given day, a given week, month or season-- all to influence where your prize largemouth will be and if it will be biting. The Hill experiments indicate pH as one of the most significant variables.

## Hummingbirds

Continued from page 8

boil the water for several minutes to kill bacteria, let cool to lukewarm, then stir in the honey. A few drops of red food-coloring added to the solution will significantly help lure birds to your feeder.

Like honey, sugar-water must be fed with discretion. These feeders should also be cleaned regularly. Don't risk the bird's health because of your laziness! Of course, too much sugar is unhealthy for any animal. There is evidence that some hummingbirds in the west rely too heavily on artificial feeders and as a result have developed enlarged livers, followed by death. But with so many native and cultivated flowers that are hummingbird favorites in Virginia, it is unlikely that you will have to worry about the hummingbirds becoming overly dependent on your feeders.

An acceptable sugar-water solution is made by mixing four parts water with one part sugar. Boil this mixture for a few minutes to kill any bacteria in the water and to achieve proper consistency. Add red coloring, and refrigerate the solution in covered jars. It is permissible to use a stronger solution (one part sugar to two parts water) when first beginning to attract hummers.

Place your feeders out in early May in the open where hummers are most likely to notice them. The best location is in a garden or wildflower patch where there are flowers naturally tempting the birds. Placing bright artificial flowers nearby may help the birds notice your feeder, as will inserting a flower into the vial. Use wire to attach your feeder to a two or three-foot stake among the flowers, or hang it from a nearby tree or shrub. After the birds find it and start to regularly use the feeder, you may gradually move it to a location where the birds are more easily observed, near a window or patio.

Insects are also attracted to sugar, and they may become quite bothersome. Frequent cleaning with water and wiping salad oil on outside feeder surfaces, including the wire holder and stake, will help alleviate the insect problem. Moving feeders into the shade may also help. Never use insecticides or chemical insect repellents.

Now that you have some basic information as to how to go about attracting hummers, you are probably ready to get started on setting up your own hummingbird feeding program. Keep in mind that the most difficult aspect of a hummingbird feeding program is to get the birds to notice and use the goodies you've planted and prepared for them. Don't be discouraged if hummers are slow in learning about your flowers and feeders. It may take time--perhaps even several summers--but once even one or two birds start feeding in your yard, you may expect more to be on their way. The rewards of a successful hummingbird feeding program are hours of entertainment and satisfaction from watching and studying these unique little birds.

## NANCY H. JAMERSON

"The Waltons" is known to millions of television viewers as a Virginia based story about a close-knit family of mountain people. The show is written and produced by Earl Hamner, Jr., who based the story on the members of his own family. His youngest sister, Nancy, is Elizabeth Walton in the series. She is now Nancy Hamner Jamerson and is Boat Registration Supervisor for the Commission of Game and Inland Fisheries.

Nancy was in actuality the youngest of the eight children born and raised by the senior Hamners in the rural Nelson County town of Schuyler, Virginia. In this small community (population 500) Nancy's father worked for a stone company, the only large organization in the area. Her life was affected a great deal by this small town atmosphere. Coupled with this was the fact that her father was an avid hunter and fisherman who often fed his family of eight children with fish, squirrel, venison, dove and other wildlife. Consequently, she learned early in life to appreciate the value of the renewable resource, both as food and as an important part of the beautiful outdoors.

During her growing-up years she recalls being part of a "very close family" and, although none of them traveled much, there were always lots of cousins, aunts and uncles around.

She graduated from Nelson County High School one Friday and on the following Monday began employment at the University of Virginia as pool secretary for 18 law professors. For some ten years she commuted the thirty miles to Charlottesville each day from Schuyler and returned home in the evening. The last five years of that period she served as secretary to the Dean of the University.

At this point in her life, November 1967, she married Garnett Jamerson from Buckingham County and the couple then moved to Richmond. For two years she worked for the Medical College of Virginia and in July of 1970, Nancy came to the Game Commission as Secretary to the Chief of the Fiscal Division. She was promoted to the position of Accountant after approximately two years. In July of 1975, Mrs. Wade, the Boat Registration Supervisor for the Commission, declared her intention to retire. Nancy applied for the position and, when accepted, began to understudy for the job.

On January 1, 1976, Nancy assumed the responsibility for boat registration for the Commission. In this capacity she oversees the administration of approximately 148,000 boats. Since tackling the job, she has grown to appreciate the great sense of accomplishment that comes from serving the boating public. "It is in this manner," she says, "that those of us engaged in dealing with the broad base of the American sporting public can best serve them in their quest for an outdoor experience."





# Growing Up Outdoors

By Sandy Coleman

## PETS

Matthew watched Amy plop down on the living room chair. "What's the matter, Amy? You look unhappy."

"Oh, it's nothing. I was just wishing that we had a pet. You and I are old enough to take care of one."

"Well, Amy, nobody said that you couldn't have one. Did you ask Mom?"

"No, I haven't yet. What do you think she will say?"

"I don't know," Matt replied. "But we won't know anything until we ask her." The two children skipped down the hall to find their mother.

"Mom, can we have a pet?" Matt and Amy chorused.

"Well, this is something we have to think about carefully," she answered. "A pet involves a great deal of responsibility. They have to be fed and looked after. Do you two think you can handle that?"

"I know we can, Mom" Matt answered. "Both of us will promise that we will take the full responsibility for our pet. Can we have both a dog and a cat?"

"Wait a minute, Matt!" Mom laughed. "I will let you two decide what you want, but you can only have one. Do you think that is fair?"

"Yes," Matt answered ruefully.

"I want a fawn or a baby raccoon or maybe a bear cub!" Amy cried.

"Amy, you can't possibly have a wild baby animal! For one thing, they get big awfully quickly and, for another, it would be cruel to the animal!" Matt answered forcefully.

"Well, what if I find one that has been hurt?" Amy answered. "Wouldn't it be the right thing to take it home then?"

"No, the right thing to do then is to call the game warden. He will



Illustration by Diane Grant

come and take the animal to a game farm where they will raise it until it is grown."

"What do they do with them then?"

"Well, they can do several things. Recently the Game Commission sent several deer to Yugoslavia. Sometimes they go to zoos and sometimes they are released in the wild."

"Well, I still don't understand why we can't get one."

"Okay. What would you feed it? Cow's milk, the milk that humans drink, is not the same as what the mother would feed it. If it did begin to grow, it would grow very fast. By fall, a tiny fawn is a big deer and it needs a lot of food and room to roam. What would you do with it then? You can't turn it loose. Since it was raised in captivity, when you let it go in the wild it could easily die from hunger or cold. Or because it never learned to fight for itself, it could be killed by other animals." Matt glanced up to find Amy watching him wide-eyed.

"I wouldn't want to do that," she told her big brother.

"I knew you would feel like that once you understood what you would be doing to the animal," Matt answered. "Dogs and cats are domes-

ticated animals. They were bred to live with man and they are perfectly adapted to it. When you want a pet, they are the ones to choose."

Matt and Amy's mother listened to Matt with a gleam of pride in her eyes. "Well, what do you want? A kitten or a puppy?"

"A kitten!" the two answered in unison.

Several days later Amy and Matt sat on the living room floor playing with their new pet, a fluffy Siamese kitten.

"Oh, Matt," Amy said when she could spare a look at her older brother. "I'm so glad we got this little kitten. She's wonderful! What should we call her?"

"Do you have any ideas?" Matt replied.

"What about Rover?" Amy said excitedly.

"Amy!" Matt yelled. "You can't call a kitten Rover. That's a dog's name!" Amy looked disappointed, so disappointed that Matt added, "well, okay. I guess we can have a different name for our kitten."

Matt and Amy turned their attention back to the living room rug, where the newly christened Rover was playfully rolling the ball Matt and Amy had given her.

# IT APPEARS TO ME

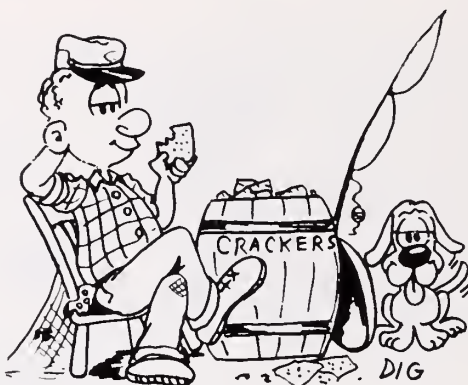
## BY CURLY

...A PERSON OUGHT TO HAVE ONE

The Judiciary Committee of the United States Senate has recently produced a booklet entitled "*Questions and Answers About Trade Product Standards: A Primer For Consumers.*" This nine pager is free and a person can benefit from the in-sight derived...especially as a better informed consumer. Request a copy from Judiciary Committee, U. S. Senate, Washington, D. C.

If your thing is porcelain plate collecting or if perchance you figger on selling some that you inherited from your passed-on kin, there is a free report available which could provide some good advice in that regard. Write to Bradford Exchange, 90509 Bradford Place, Northbrook, Illinois 60062.

Drivers, take heed! Even though your Uncle Sam has freed some money to help fix up the proliferation of pot holes that have plagued motorists nation-wide, the final responsibility still rests with us. In addition to avoiding these minature canyons as a means of protecting our tires, there are many other things that we can do. Not only will properly maintained tires improve the performance, save money and increase fuel economy...they will also enhance the safety aspects of motor-ing. If you are really interested in all this, you can get a free Consumer Tire Guide. Request it by sending a



stamped, self-addressed business size envelope to Tire Safety Council, Box 1801, Washington, D. C. 20013.

And here is a free tip from your friendly Energy Office of the County Extension Service. When you operate your food disposal unit, don't use hot water. Not only is it wasteful but hot water is less able to get rid of the grease which has built up. Cold water solidifies the grease that is then easily ground up and washed away.

Cheese lovers...and who isn't these days? Very few of us, I'll wager, and that in spite of the cholesterol controversy which continues on the scene. Anyhow, if you are turned on by cheese and want the un-garbled truth about low fat content in cheese and other good details, you are in luck. The Switzerland Cheese Association has prepared some free information on the subject for you. Write to them: S.C.A., Department C, 444 Madison Avenue, New York, New York 10011.

### ...FOR YOUR BOOK SHELF

It's a thought-provoker, it's a test book, a body can use it for reference and, for you river-lovers, it's a must.

"*Flowing Free*" contains a wealth of background information about wild and scenic rivers, outlines some pertinent points for would-be river-savers and is available for the pittance price of \$3.50 from the River Conservation Fund, 317 Pennsylvania Avenue, S.E., Washington, D. C. 20003.

"*Chimney & Stove Cleaning*" is a dandy little paperback consisting of 27 pages crammed full of practical ideas and hints for keeping stoves and pipes and chimneys clean...with little or no mess. Long about now, you stove users should be thinking about that task and a better booklet would be hard to find, especially at the \$1.00 price tag. Write to Garden Way Publishing, Charlotte, Vermont 05445 and ask for Bulletin A-14(S).

### .....AND THEN

Sharing things with friends or even strangers is an old and time-honored way of life. This philosophy has been passed down from one generation to another by those who have gone before. Not long ago, I heard a bit of what seemed to be a pure "home-spun" or "down-home" description of sharing. I have no idea who originated it, but I tip my hat to whoever it was that said: "If you see someone without a smile, give him one of yours."



# On The Waterfront

Edited by Jim Kerrick



## ADVANCE PREPARATION

Now is the time to begin preparation for the 1978 boating season. Maybe you think it is too soon, but it is not at all.

Examine your vessel and make all necessary repairs. Do not wait until you are ready to hook your rig to the car before examining and repairing your rig. Check for any hull damage, the fuel system, electrical system and ventilation ducts.

Examine your equipment. Make sure you have all the equipment required by the Federal Boat Safety Act of 1971 for the size of your vessel. In particular check your personal

flotation devices (PFD's) and fire extinguishers must be U. S. Coast Guard approved. PFD's must be in good serviceable condition. No broken straps or tears and the label must be readable. Check your steering cables and it is a good idea to remove all the old grease and lubricate with the proper grease. Drain your fuel tank and make sure there is no sediment in the bottom of the tank. Check the grease in the lower housing of your motor. Check and replace the sparkplugs if necessary.

Examine yourself. Are you totally familiar with all aspects of small craft seamanship? Do you know how to cope with an emergency situation that might arise? If not, now is the time to take a boating course from

the U. S. Power Squadron or the U. S. Coast Guard Auxiliary. If you are unable to attend a regular course, contact the Virginia Commission of Game and Inland Fisheries, P. O. Box 11104 or 4010 West Broad Street, Richmond, Virginia 23230 and obtain a copy of *Virginia Better Boating, A Guide to Safety Afloat* at the nominal cost of \$1.00. Enhance your knowledge of safe boating by studying at home.

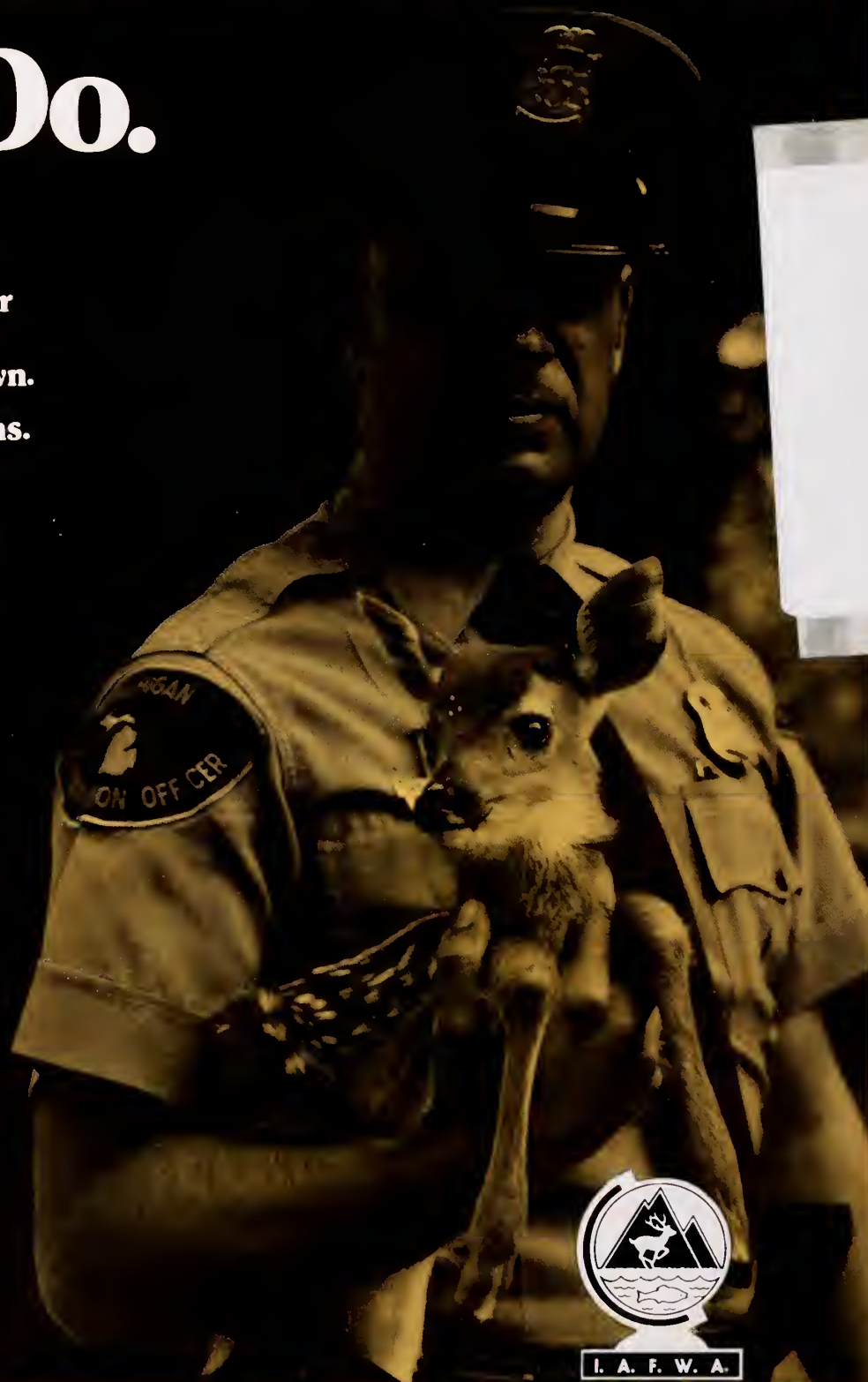
Examine your laminated certificate of number to be sure it is valid. Does your boat trailer have a current inspection sticker?

Don't put off advance preparation. A little work now will make your trips on Virginia Waterways a more pleasant experience.

# Care About America's Wildlife. We Do.

A well meaning  
person gave this  
conservation officer  
what they thought  
was an orphan fawn.

Don't pick up fawns.  
In most cases  
their mother is  
watching nearby,  
waiting for you  
to leave.



I. A. F. W. A.

**International Association of Fish & Wildlife Agencies**

1412 16th Street, N.W., Washington, D.C. 20036